

A STUDY ON OPEN ACCESS IN INDONESIA

MITA PAUL¹ & ANINDYA BASU²

¹Librarian, Guru Nanak Institute of Pharmaceutical Science and Technology, Kolkata, West Bengal, India

²Librarian, Maharani Kasiswari College, Kolkata, West Bengal India,

ABSTRACT

This paper investigates the current state of open access repositories and journals of Indonesian universities. It delineates few characteristics like types, contents, disciplines, language etc. The data source for the analysis are Open Directory of Open Access Repository (OpenDOAR) and Directory of Open Access Journal (DOAJ). We have found 38 such institutional repositories from Indonesia starting from 2009. Since then, this country has shown a good growth in Open Access. Though any kind of open access mandate is not exist but policy makers may consider new web access policy and publishing guidelines. The landscape of OA development in Indonesia is quite satisfactory.

KEYWORDS: Open Access, Indonesia, Institutional Repository, Open Access Journal

INTRODUCTION

Open access is meant for dissemination of information without paying any subscription fees or license fees or facing any kind of embargo period. Open access is realized through institutional repositories and Open Access journals. Through IR, any author can self-archive their intellectual or scholarly output. IR has become a part of research infrastructure in research institutes and universities. Still many authors are not aware of institutional repositories and open access journals. Encouragements from the academia and government can be good driving force. Several countries have mandated their own open access policy. In India, ICAR (Indian Council of Agricultural Research) has implemented own open access policy. South Asian countries have shown a very good growth in this regard. In this paper, Indonesia have considered to understand their Open Access scenario in terms of its institutional repositories and open access journals.

LITERATURE REVIEW

Already there are a good number of studies in the field of institutional repositories conducted to represent a overview of the different countries. In “Institutional repository deployment in the United States as of early 2005”, Lynch and Lippincott shows that in USA over 40% of the higher education institutions have institutional repositories in operation, while 88% of non-deployment institutions have planned to establish one.

Through “Census of institutional repositories in the U.S.: a comparison across institutions at different stages of IR development” (2007), Rieh et al showed the researchers divided the institutional repository development in several different stages which showed 41% of institutional repository implementation stage, 63% of planning and pilot testing stage and 84% of planning only stage. Their findings aslo showed that faculty and graduate students had major contributions to the operational institutional repositories and the widely used platform is DSpace.

Van Eijndhoven and Van Der Graaf (2007) inspected the growth pattern and development of institutional repositories of 230 universities in EU through web survey, wiki and telephonic interviews.

In Kiran and Chia (2009) reported that in Malaysia there were 12 institutional repository initiatives, all of which are universities. The commonly used software is ePrints and a wide range of theses and dissertations are deposited in the institutional repositories.

Melero et al (2009) reported that Spanish repositories contained mainly full-text and metadata of journal articles and theses. The widely used software platform is DSpace, followed by EPrints; and commonly Dublin core metadata is used to describe the bibliographic attributes of the deposited materials.

Prabhat and Gautam (2010) reported India as the second contributor to the world institutional repositories in the Asian region. Out of the 221 Asian institutional repositories they found 49 which belong from India and average increase of about 9 new institutional repositories per year. Widely used software platform is DSpace.

Ghosh and Das (2006) shows repositories follow self-archiving model and have initiated using two most popular open source software – DSpace and GNU EPrints. Their findings also showed that maximum number of institutional repositories belong to scientific and technological areas than humanities and social sciences areas. Matsuura (2008) reported that Japan has been placed itself as the fourth biggest contributor by counts of institutional repositories in OpenDOAR. It also reflects that majority of the content of these institutional repositories are departmental bulletins followed by academic journal articles. Islam and Chowdhury (2011) focused different open access initiatives and present status of different institutions in Bangladesh. The country has so many barriers in accessing scholarly literature in different stages. DSpace got the highest preference as IR software in Bangladesh.

OBJECTIVES

- To analyze latest developments of institutional repositories in Indonesia.
- To identify the characteristics in terms of content, types, language, subject distributions etc.
- Growth pattern of IRs in Indonesian research institutes and universities.

INSTITUTIONAL REPOSITORIES IN INDONESIA

Some institutions of Indonesia have established open access institutional repositories (IR) that disseminate research outputs of respective institution. Some institutions are Binus University, Bogor Agricultural University, Graduate Program of Management and Business, Bogor Agricultural University, Borneo University, Bunda Mulia University, CISRAL Universitas Padjadjaran, Diponegoro University (UNDIP), EEPIS, Gunadarma University, Hasanuddin University. IPB Repository (Bogor Agricultural University Repository) is the one of the biggest open access institutional repository in Indonesia maintained by Bogor Agricultural University (61274 items, Jan 2015) that stores and provides access to articles; theses; unpublished; books. This IR deals with multidisciplinary subjects.

Binus University Repository also have a big collection where 21558 items (Jan, 2015) are stored and the host institution of this IR is Binus University. This IR stores and provides access to different research documents and covers the subjects are Computers and IT; Language and Literature; Social Sciences General; Business and Economics; Education; Library and Information Science; Management and Planning; Psychology.

MB IPB Repository is an example of document type specific collection that stores and provides access to theses. This IR maintained by Graduate Program of Management and Business and Bogor Agricultural University of Indonesia.

MB IPB accepts thesis from the researchers that is accepted in any of the Indonesian universities or institutions. It deals with 1970 items and multidisciplinary subjects.

EEPIS Proceeding is a RT of Indonesia which host institution is EEPIS. They don't have a healthy collection but still this repository stores and provides access to conferences.

In Indonesia some institutions like Binus university, Bogor agricultural university, Graduate program of management and business, bogor agricultural university, Borneo university, Bunda mulia university, CISRAL universitas padjadjaran, Diponegoro university ,EEPIS, Gunadarma university have open access institutional repositories architecture that archive and disseminate research outputs of respective institutions.

Table 1: Open Access Institutional Repositories in Indonesia

SI No.	Name of the Repositories	Host Institution	Url	No. of Items (As On Jan, 2015)
1	Binus University Repotor	Binus University	http://eprints.binus.ac.id/	21558
2	IPB.Repository(Bogor Agricultural UniversityReository)	Bogor Agricultural University	http://repository.ipb.ac.id/	61274
3	UNDIP -IR(Diponegoro University Institutional Repository)	Diponegoro University (UNDIP)	http://eprints.undi.ac.id/	39542
4	ITS Digital Repository	Institut Teknologi Sepuluh Nopember	http://digilib.its.ac.id/	34405
5	Ispektra Digital Collection	Petra Christian University	http://dewey.petra.ac.id/catalog/ft.pp/	16436
6	Scientific Repository	Petra Christian University	http://repository.petra.ac.id/	16330
7	Institutional Repository UIN Syarif Hidayatullah Jakarta	UIN Syarif Hidayatullah Jakarta, State Islamic University, Indonesia	http://repository.uinjkt.ac.id/dspace/	21974
8	Universitas.Andalas Institutional Repository	Universitas Andalas	http://repository.unand.ac.id/	17828
9	uiana	Universitas Indonesia	http://eprints.lib.uin.ac.id/	24138
10	USU Repository	University of Sumatera Utara Library, University of Sumatera Utara	http://repository.usu.ac.id/	40094
11	Ubaya Repository (University of Surabaya Institutional Repository)	University of Surabaya	http://repository.ubaya.ac.id/	19096

Growth of Open Access IRS in Indonesia

Here fig.1 shows year wise distribution of number of open access repositories or growth of open doar databases in Indonesia. They did not have single IR in their country in January, 2008. But during January 2009 Indonesia the developing country start their journey by establishing open access repositories and through out seven years the curve always arising. During starting this year it became 38 IR in Indonesia.

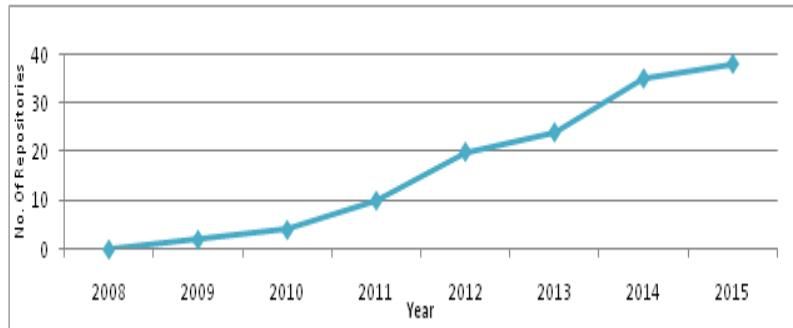


Figure 1: Growth of Open Access Institutional Repositories in Indonesia

Initiatives for Open Source Software

Already Indonesia have been started to use Open Source Software for the development of open access archives in their universities and research centres/institutes. Through different university and research institutions have arranged different training programmes and workshops. Table 2 shows that most of those universities depended to create and maintained the database on EPrint which is an open source software has been used by 68.42% host organizations of IRs. DSpace is the another popular open access repository software used in Indonesia where above 21% open access repositories host organizations established their digital archive through DSpace. Some of them used Ispektra and GAE as their repository software also.

Table 2: Usage Percentage of Open Access Repository Software in Indonesia

Software Name	% of Usage of Software
EPrint	68.42
DSpace	21.05
Ispektra	2.63
GAE	2.63
Unknown	5.26

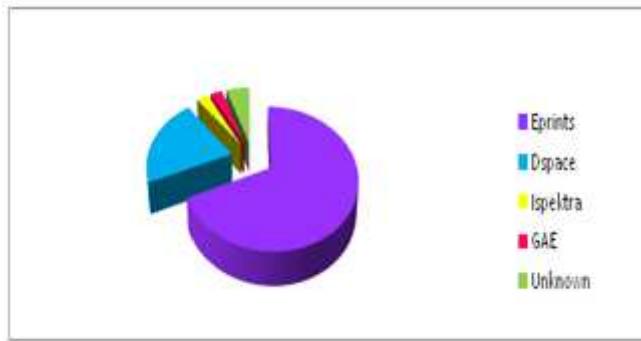
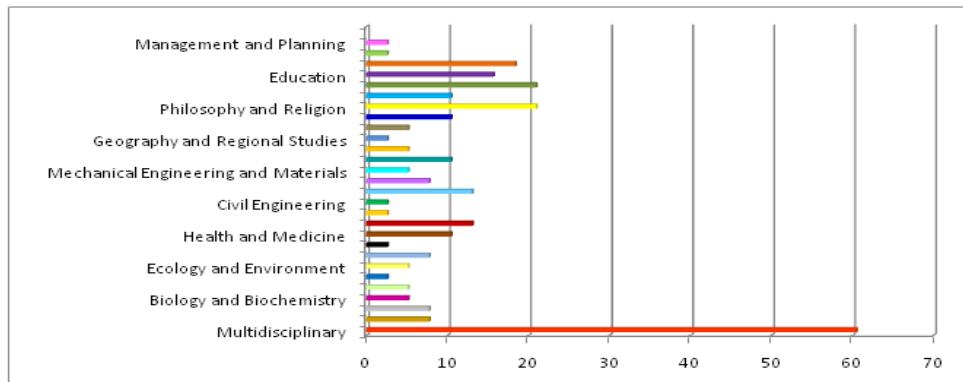


Figure 2: Usage of Open Access Repository Software

Subjects Covered by Institutional Repositories

Among 38 open access repositories in Indonesia 23 are multidisciplinary and there also have some subject specific IRs. ISI denpasar institutional repository which have 1793 articles; books; multimedia of fine and performing arts. Above 60% repositories are deals with multidisciplinary subjects.

**Figure 3: Subjects Covered by IRs**

Repository Content Types

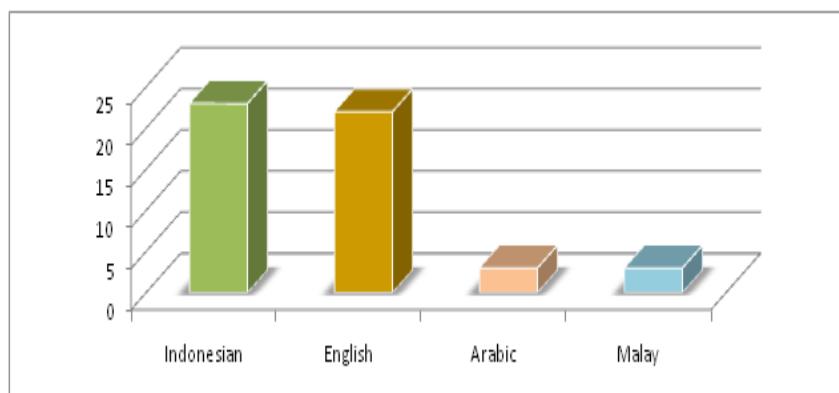
76 % above IRs are stored articles in their database. Most of them (approx 81% above) like Binus University Repository, IPB Repository, MB IPB Repository, Repository Universitas Padjadjaran, IAIN Sunan Ampel Repository, Walisongo Institutional Repository, ITS Digital Repository, LIPI Institutional Repository, UIN Maliki Malang Repository are storing and provides access to theses. Only 2.6 % IRs are deals with patents and 7.9 % repository stores multimedia and special.

Table 3: Media/ Content Types

Content Types	%
Articles	76.3
Theses	81.5
References	13
Books	26.3
Unpublished	26.3
Conferences	28.9
Learning Objects	21
Multimedia	7.9
Patents	2.6
Special	7.9

Language Covered by Indonesian IRS

Above 60 % of Indonesian open access repositories stored document language type is Indonesian.

**Figure 4: Language Covered By Indonesian IRs**

OPEN ACCESS JOURNALS IN INDONESIA

It is a good indication that Indonesia is adopting the open access much faster compared to many developing asian countries. A good number of high quality open access journals are being published from this country and those OA journals are covering wide range of subjects. There are so many publishers in this category, here 10 major need special attention. They are - Institute of Advanced Engineering and Science (IAES), Universitas Ahmad Dahlan, Petra Christian University, Diponegoro University, Universitas Indonesia, Institut Teknologi Bandung and so on.

Now Indonesian information centers and libraries affixed to different institutions are taking part in open access movement, by establishing institutional digital repositories to provide global access to their research and other documents.

Sl. No.	Publisher	Number Of Journals (As On January, 2015)
1	Institute of Advanced Engineering and Science (IAES)	10
2	Universitas Ahmad Dahlan	8
3	Petra Christian University	6
4	Diponegoro University	6
5	Universitas Indonesia	5
6	Institut Teknologi Bandung	4
7	University of Brawijaya	3
8	Universitas Negeri Semarang	3
9	Universitas Kristen Petra	3
10	Institute of Advanced Engineering and Science	3

Table 4: Indonesian Publishers and Their Open Access Journals

Journals from the Iaes

Institute of Advanced Engineering and Science (IAES)

Table 5

Sl.No.	Journal Name	Subject Areas	Started Publishing Open Access Content In
1	International Journal of Social Networking and Virtual Communities	Social sciences	2012
2	IAES International Journal of Robotics and Automation (IJRA)	Mechanical.engineering.and machinery, Technology	2012
3	International Journal of Informatics and Communication Technology	Information technology, Industrial engineering. Management engineering, Technology	2012
4	International Journal of Evaluation and Research in Education	Education	2012
5	IAES International Journal of Artificial Intelligence (IJ-AI)	Electronic computers. Computer science, Instruments and machines, Mathematics, Science	2012
6	International Journal of Advances in Applied Sciences	Science	2012

Table 5 – Cond.,

7	International Journal of Information and Network Security (IJINS)	Electronic computers. Computer science, Instruments and machines, Mathematics, Science	2012
8	International Journal of Reconfigurable and Embedded Systems (IJRES)	Electronic computers. Computer science, Instruments and machines, Mathematics, Science	2012
9	International Journal of Power Electronics and Drive Systems	Electrical engineering. Electronics. Nuclear engineering, Technology	2011
10	International Journal of Public Health Science	Public aspects of medicine, Medicine	2012

Journals From The Universitas Ahmad Dahlan**Table 6**

Sl.No.	Journal Name	Subject Areas	Started Publishing Open Access Content In
1	Journal of Educational, Health and Community Psychology	Psychology, Philosophy. Psychology. Religion	2012
2	Journal of Telematics and Informatics	Telecommunication, Electrical engineering. Electronics. Nuclear engineering, Technology	2013
3	HUMANITAS	Psychology, Philosophy. Psychology. Religion	2011
4	Jurnal Informatika	Electronic computers. Computer science, Instruments and machines, Mathematics, Science	2008
5	Buletin Teknik Elektro dan Informatika	Electrical engineering. Electronics. Nuclear engineering, Technology	2012
6	Jurnal Kesehatan Masyarakat	Public aspects of medicine, Medicine	2009
7	Jurnal Citizenship	Communication. Mass media, Philology. Linguistics, Language and Literature	2011
8	Journal of Education and Learning	Education	2012

Journals from the Petra Christian University**Table 7**

Sl.No.	Journal Name	Subject Areas	Started Publishing Open Access Content In
1	Civil Engineering Dimension	Engineering (General). Civil engineering (General), Technology	1999
2	Jurnal Teknik Industri	Industrial engineering. Management engineering, Technology (General), Technology	1999
3	Jurnal Informatika	Electronic computers. Computer science, Instruments and machines, Mathematics, Science	1999
4	K@ta: a Biannual Publication on the Study of Language and Literature	Language and Literature	1999
5	Nirmana	Arts in general, Fine Arts	1999
6	Dimensi : Journal of Architecture and Built Environment	Architecture, Fine Arts	1999

Journals from the Diponegoro University**Table 8**

Sl.No.	Journal Name	Subject Areas	Started Publishing Open Access Content in
1	International Journal of Renewable Energy Development (IJRED)	Environmental engineering, Engineering (General). Civil engineering (General), Technology	2012
2	International Journal of Science and Engineering	Chemical engineering, Chemical technology, Technology	2010
3	Jurnal Sistem Komputer	Electronic computers. Computer science, Instruments and machines, Mathematics, Science	2011
4	Journal of the Indonesian Tropical Animal Agriculture	Animal culture, Agriculture	2011
5	Bulletin of Chemical Reaction Engineering & Catalysis	Chemistry, Science	2007
6	Kapal	Naval Science, Naval architecture. Shipbuilding. Marine engineering	2010

Journals from the Universitas Indonesia**Table 9**

Sl.No.	Journal Name	Subject Areas	Started Publishing Open Access Content In
1	Makara Seri Kesehatan	Public aspects of medicine, Medicine	2002
2	Makara Seri Sains	Chemistry, Science, Biology (General), Science	2002
3	Makara Seri Sosial Humaniora	Social sciences	2002
4	International Journal of Technology	Technology	2010
5	Makara Seri Teknologi	Technology	2002

Journals from the Institut Teknologi Bandung

Table 10

Sl.No.	Journal Name	Subject Areas	Started Publishing Open Access Content In
1	ITB Journal of Information and Communication Technology	Information technology, Industrial engineering. Management engineering, Technology	2007
2	The Asian Journal of Technology Management	Technology, Management. Industrial management, Industries. Land use. Labor, Social Sciences	2008
3	ITB Journal of Engineering Science	Technology, Engineering (General). Civil engineering (General)	2003
4	Journal of Mathematical and Fundamental Sciences	Science	2013

CONCLUSIONS

The awareness on OA is very satisfactory and opens up a space for scholarly output sharing in scientific research arena. Both the number of open access journals and IRs are increasing at a very satisfactory rate. Based on the data available, open access movement is getting momentum surpassing publishers sole dominance. On contrary to that, few top ranked asian universities have not given much attention to give priority to this kind of initiative. Greater participation can be easily expected from universities and other research institutes in future. It is also important to identify the factors that have led to timely growth.

REFERENCES

1. Abrizah, A. Noorhidawati, A. and Kiran, K. (2010). Global visibility of Asian universities' Open Access institutional repositories. *Malaysian Journal of Library & Information Science*, 15, 3, 53-73
2. DOAJ. 2015. Directory of Open Access Journals . Available at: <https://doaj.org/>
3. Fernandez, L. (2006). Open access initiatives in India: An evaluation. *The Canadian Journal of Library and Information Practice and Research*, 1, 1. Available at: <http://journal.lib.uoguelph.ca/index.php/perj/article/view/110/172>.
4. Ghosh, S. B. & Das, A.K. (2007). Open Access and Institutional Repositories—A Developing Country Perspective: A Case Study of India. *IFLA Journal* 33,3, 229-250
5. Islam, Anwarul and Chowdhury, Salma (2011). Open Access Institutional Repositories for Scholarly Communication: A Developing Country Perspective. *Asia Pacific Conference Library & Information Education & Practice*. 506-514.
6. Kiran, K. and Chia, Y.P. (2009). Open access initiatives in academic libraries: challenge to the user. Paper presented at World Library and Information Congress: 75th IFLA General Conference and Assembly: Libraries create futures: Building on cultural heritage, held on 23-27 August 2009 at Milan, Italy.
7. Lynch, C. A. and Lippincott, J. K. (2005). Institutional repository deployment in the United States as of early 2005. *D-Lib Magazine*, 11, 9. Available at: <http://www.dlib.org/dlib/september05/lynch/09lynch.html>

8. Matsuura, K. (2008). Japan's Institutional Repositories: Where did they come from and where are they headed? Master's theses, University of North Carolina at Chapel Hill. Available at: <http://hdl.handle.net/1901/582>
9. Melero, R., Abadal, E., Abad, F., and Rodríguez-Gairín, J.M. (2009). The situation of open access institutional repositories in Spain: 2009 report. *Information Research*, 14, 4. Available at <http://InformationR.net/ir/14-4/paper415.html>
10. OpenDOAR. 2015. *The directory of open access repositories: OpenDOAR*. Available at: <http://www.opendoar.org>
11. Prabhat, S. and Gautam, J.N. (2009). Institutional repositories: new initiatives to preserve the intellectual output in India. In K. Sanjay, J.P.K. Anbu, and ShriRam (Eds.), *Emerging Technologies and Changing Directions of Libraries and Information Services*, 173-177
12. Rieh, S.Y., Markey, K., Jean, B., Yakel, E., and Kim, J. (2007). Census of Institutional Repositories in the U.S.: A Comparison Across Institutions at Different Stages of IR Development. *D-Lib Magazine*, 13. Available at <http://roar.eprints.org/>
13. Van Eijndhoven, K. and Van der Graaf, M. (2007). Inventory study into the present type and level of OAI compliant Digital Repository activities in the EU. Available at: <http://www.driversupport.eu/documents/DRIVER%20Inventory%20study%202007.pdf>